

to amplify stereo audio signals and drive the speakers and a mains operated electrical power supply to provide power to the amplifier. The amplifier is located in the same room as the speakers and remote from the signal source and power supply. The amplifier is connected to the signal source and power supply by means of a category 5 four pair twisted cable (or similar) which provides, in respective conductors of the twisted pairs, right channel audio signals from the signal source to the amplifier, left channel audio from the signal source to the amplifier and DC power from the power supplier to the amplifier.

None of the references, alone or in combination, discloses use of category 5 four pair twisted cable, or any similar cable, which carries signals sources to amplifiers in a stereo system and DC power from the power supply to the amplifier.

The Lloyd article describes a home entertainment system in which receivers are situated in each room and plug into a standard hi-fi system. As stated in the article, the system is designed to "...avoid laying bulky speaker cables throughout a house and pumping high-voltage currents across them from a centralized hi-fi system. Instead we send unamplified signals across the home on "balanced" cables, which avoids picking up interference from other household devices along the way."

Contrary to the statement in the action, there is no disclosure or suggestion in the Lloyd article that the amplifier is located in a room remote from the power supply. Indeed, the Gold article entitled "Linn Knekt Multi-Room System", cited by the examiner indicates that the system uses four twisted pairs two of which carry balanced audio and two carry bi-directional control signals. As such, applicant submits that the referenced system does not disclose twisted cable

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carrying a power supply signal. In fact, the Lloyd article suggests to the contrary noting that the use of unamplified signals “avoids picking up interference from other household devices along the way.”. As is apparent, a power supply signal could provide interference.

The Wickelgren article discusses the firewire electronic bus used with personal computer systems. The standard cable uses two twisted pairs and a pair of power wires. The power wires do not comprise a twisted pair. Moreover, as noted on page 22, the standard cables “should stretch no more than 4.5 meters between nodes.”

Attached hereto is a copy of a Knekt system installation manual. This installation manual describes the Knekt system in the cited Lloyd article. Applicant refers the examiner’s attention to the paragraph in bold lettering at the bottom of page 6 of the installation manual which reads as follows:

Plan the wire route to AVOID (emphasis in original) running beside Mains/Power cables, appliances with motors, Dimmer switches, TV sets or anything that can produce Radio noise. We’ve seen Fans, Refrigerators and Dimmer switches totally confuse the system and degrade the sound!, so AVOID!!!!

Page 14, under the heading “Bypassing wall sockets.” includes a statement that “Mains should be supplied via normal sockets in the cupboard and a normal power cord to the products.” Moreover, at page 24, under the heading “ROOM INSTALLATION.”, the instructions indicate that the audio input should be connected to the RJ45 sockets. It otherwise indicate that the user should “Wire up mains, (power amplifier if using the KNEKT line receiver) and speakers.”

As is apparent from the installation manual for the KNEKT system, as well as

information previously provided, the KNEKT system not only does not teach delivering power on the same cable as the audio signals, the user is instructed to AVOID running the power in proximity to the audio signals.

The statement on page 3 of the action that “The applicants argument is not persuasive because Lloyd as modified do disclose using twisted pair wires for signals (which would be for right and left channel audio signal) and two power wires for power.” is not supportable. Particularly, there is no Lloyd “as modified”, other than the proposed modification. The proposed modification is contrary to the express teachings of the system described in the Lloyd article.

In contrast to the cited references, the invention defined by claim 1 is based on the realization that both stereo audio signals and appropriate power signals can be transmitted simultaneously through a category 5 four twisted pair cable in a distributed stereo audio system. This realization enables such distributed stereo audio systems to be commercially viable since the category 5 cable is readily available and requires no special hardware or software terminators. The invention is not obvious in that it would not generally be expected to be suitable because the high bandwidth twisted pairs are not expected to be able to carry power signals and if they were expected to be able to cope with power signals, the expectation is that they would cause interference in the accompanying, unshielded signal carrying pairs. It is surprising and inventive that this has turned out to be so in that the cable has proven to be highly suitable for this unexpected purpose.

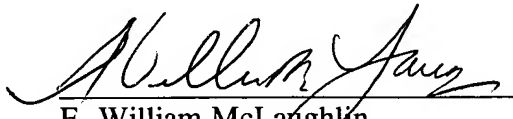
The Examiner’s comment regarding the limitation “or similar” is also incorrect. This limitation refers to category 5, not the use of twisted pairs. Claim 1 clearly recites that DC power is provided on conductors of the twisted pairs.

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Because the Wickelgren article does not discuss use of a twisted pair for providing a power supply signal, combining it with the Lloyd article would not result in the claimed invention. Moreover, the combination is improper. The Lloyd article discusses a system in which transmitters and receivers are located in different rooms throughout a house. The Wickelgren article discloses interconnecting devices that are no more than 4.5 meters between one another. Indeed, the devices are intended to be located in close proximity to one another as part of a computer system as illustrated on page 20. As such, the references are not properly combined. Moreover, the Lloyd article teaches away from transmitting power in its cable so that one skilled in the art would not consider the teachings of Wickelgren to be relevant for this reason as well.

For the above reasons, independent claim 1 and dependent claims 2-19 are believed allowable and withdrawal of the rejection is requested.

Respectfully submitted,


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